

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A method for removing gas from comminuted lignocellulose material, comprising: wherein the material
 - a. heating the comminuted lignocellulose material as a gravitationally lowering column by supplying steam transverse to the movement of the column;
 - b. maintaining the heating so that a temperature of 80°C to 160° is reached in the column;
 - c. introducing the column of the heated lignocellulose material to a horizontal gas removal section and advancing the heated lignocellulose material as a composed bed through the horizontal gas removal section within a time period ranging from 10 to 65 minutes;
 - d. sealing a gas space above the surface of the composed bed of heated lignocellulose material in the horizontal gas removal section, thereby adjusting the height and form of the top of the composed bed;

e. maintaining the temperature of the composed bed in the horizontal gas removal section at approximately the temperature reached in step b by introducing steam beneath the composed bed;

f. removing gas from above the gravitationally lowering column, from the gas space above the top of the composed bed, or both.

~~composed in a gravitationally lowering column is heated to a degasification temperature with steam supplied essentially to traverse the column, and wherein the heated material is directed to advance as a composed bed through a gas removal section, the temperature of the material bed is maintained at the degasification temperature in said gas removal section by introducing steam beneath the material bed, and gas is removed from the top of the material bed.~~

2. (Canceled)

3. (Currently Amended) A method in accordance with claim 2, wherein the comminuted lignocellulose material is heated to a temperature of 100°C to 130°C for degasification in step b.

4. (Currently Amended) A method in accordance with claim 1, wherein the comminuted lignocellulose material is heated in step b to the degasification said temperature in a time ranging from 20 to 180 seconds.

5. (Canceled)

6. (Currently Amended) A method in accordance with claim 1, wherein the condensate formed in step b ~~the heating~~ is removed.

7. (Previously Presented) A method in accordance with claim 3, wherein the material, subsequent to the heating, is maintained as said composed bed at a pressure essentially corresponding to the steam pressure at the prevailing temperature.

8. to 12. (Canceled)

13. (New) An apparatus for removing gas from comminuted lignocellulose material, comprising:

an upright vessel comprising:

an upper part, having means for feeding the material to be treated into the apparatus;

an intermediate part, having means for supplying steam transverse to the direction of movement of the material to be treated; and

a lower part, which can receive a heated, gravitationally lowering column of material to be treated from the intermediate part;

a longitudinal vessel positioned horizontally or slightly downwards inclined with respect to the upright vessel, and comprising:

a first end connected to the lower part of the upright vessel to receive a composed bed of material to be treated from the lower part of the upright vessel;

a second end having an outlet for removing treated material from the apparatus;

a conveying means for transporting the material to be treated along the length of the longitudinal vessel from the first end to the second end, and comprising separate parallel lamellae disposed in a lower part of the longitudinal vessel and extending essentially over the length thereof, wherein each lamella is movable in the longitudinal direction; and

an adjustment stop disposed in an upper part of the longitudinal vessel at or adjacent to the first end thereof.

14. (New) The apparatus in accordance with claim 13, wherein the longitudinal vessel further comprises:

one or more inlets for supplying steam disposed beneath the lamellae;

one or more outlets for removing gas disposed in the upper part of the longitudinal vessel;

one or more outlets for removing liquid disposed in the lower part of the longitudinal vessel.

15. (New) The apparatus in accordance with claim 13, wherein the longitudinal vessel is tubular.

16. (New) The apparatus in accordance with claim 13, wherein the means for feeding the material to be treated into the apparatus comprises a silo or tower.

17. (New) The apparatus in accordance with claim 13, wherein the length of the longitudinal vessel is larger than the cross-sectional dimension thereof.

18. (New) The apparatus in accordance with claim 13, wherein the means for supplying steam transverse to the direction of movement of the material to be treated comprises means for introducing steam into the middle of the upright vessel and means for introducing steam at the periphery of the upright vessel.

19. (New) The apparatus in accordance with claim 18, wherein the means for introducing steam into the middle of the upright vessel comprises a supply pipe and a sieve for dividing steam from the supply pipe evenly.

20. (New) The apparatus in accordance with claim 19, wherein the means for introducing steam at the periphery of the upright vessel comprises an inlet and a distribution chamber extending around the periphery of the upright vessel.

21. (New) The apparatus in accordance with claim 13, wherein the upright vessel enlarges in the downward direction.